

REMARKS

Claims 1 – 48 are pending in this application. Claims 1 – 6, 8, 11 – 13, 15, 16, 27, 31, 32 and 43 – 46 have been amended to more particularly define and distinctly claim the instant invention. The specification was amended to further define groove, which inherently includes at least two sides. In addition to “at least two sides” being fundamental to the word “groove” attention should also be directed to the drawings, which show grooves 14 and 16 having at least two sides. Moreover, definitions from Merriam-Webster Online and Cambridge Dictionaries Online define groove as “a long narrow channel or depression” and “a long, narrow, hollow space cut into a surface”, respectively. Definitions from Merriam-Webster Online and American Heritage Dictionary from yourdictionary.com define channel as “a long gutter, groove or furrow” and “a trench, furrow, or groove,” respectively. Such meanings inherently include a shelf having at least two sides. Accordingly, no new matter has been added. In view of the foregoing amendments and following remarks, reconsideration of the application is respectfully requested.

Claims 1 – 32, 43 and 45 – 48 were rejected under 35 U.S.C. 102(b) as being anticipated by Names (U.S. Patent No. 6,056,547). The Examiner states that Names ‘547 discloses a cylinder 10A having horizontal and vertical shelves, as well as a cantilever 14b. The Examiner further notes that the cylinder is used with a fiber reinforced impression material. For the reasons set forth below, the rejections are respectfully traversed.

The claimed invention is directed to a cylinder for an implant system wherein the cylinder is designed to retain a structural framework material, composite material, or ceramic material. The cylinder has a substantially cylindrical body and includes one or more shelves disposed on a surface of the substantially cylindrical body, wherein the shelves comprise one or more grooves having at least two sides. The cylinder may include a cantilever extending from the cylindrical body if it is to be used at the end of a row of cylinders for an implant system. Moreover, the cylinder may include a series of nodules, holes or beads disposed on a surface of the cylindrical body. The cylinders of the invention are an integral component of the actual implant system.

Names '547 is directed to an implant system comprising a framework and a prosthesis wherein the framework comprises foundation elements 10 used as components in the final restoration. The foundation elements in Names '547 contain seats 23 to support the prosthesis formed around the framework in the final restoration. The elements in Names '547 also include an elongated member 14, which is used for receiving prosthetic material for molding or sculpting prosthetic teeth onto foundation elements 10. Names '547 states that is it possible to sever elongated member 14 from base member 12a and reattach elongated member 14 via a compatible luting composite to base member 12 such that elongated member 14 is closer to seat 23 so that elongated member 14 rests upon seat 23.

Although Names '547 shows the use of elongated member 14 and seat 23 on foundation elements 23 to form a framework, Names '547 is not concerned with the wrapping of material around the foundation elements to form a framework. Names '547 does not take into consideration the problems associated with trying to retain material on the framework. In fact, Names '547 teaches away from retention by teaching merely luting member 14 to base member 12. There is no indication to "retain" material on the foundation elements.

The inventors herein have discovered that luting between the components (foundation elements), as disclosed by Names '547 does not provide a strong, integral framework. Merely luting one component to another does not provide a good bond between the components. The inventors herein conceived and developed cylinders for an implant system whereby the cylinders serve as the foundation for the framework. The cylinders of the instant application have grooves, which retain the fiber reinforced composite (frc) framework. The grooves, which have at least two sides, actually retain the components that form the framework. The vertical grooves, denoted by 14 in the figures, have a bottom, left and right side. A bar may be placed in the groove. The bottom side supports the bar and the left and right sides retain the groove in place. The horizontal grooves, denoted by 16 in the figures, have bottom and top sides. These horizontal grooves retain the frc material as it is wrapped around the cylinders, preventing it from moving (up or down) off the cylinder. The ability of the cylinders to

retain the frc materials thereon result in a strong, framework having high fracture toughness.

Names '547 does not show, suggest or teach the use of grooves to retain framework material thereon. Seat or shelf 23 in Names '547 is merely a ledge that may support framework material, but will not retain framework material. The sides in the grooves of the instant invention retain the framework material on the cylinders. Similarly, elongated member 14 of Names '547 is a cantilever which does not include grooves thereon. There is nothing on elongated member 14 that would retain material. The claims are not anticipated by Names '547.

Claim 44 was rejected under 35 U.S.C. 102(b) as being clearly anticipated by Klardie, U.S. Patent No. 5,782,918. For the reasons set forth below, the rejections are respectfully traversed.

Claim 44 is directed to a cylinder designed to retain a structural framework material, composite material, or ceramic material for an implant system for placement in the mouth comprising a substantially cylindrical body, one or more grooves having at least two sides, wherein the grooves are disposed on a surface of the substantially cylindrical body, and a series of nodules, holes or beads disposed on a surface of the cylindrical body.

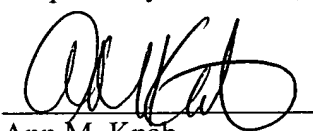
Klardie '918 is directed to an implant abutment system comprising an implant 11, abutment 42 and a pin 90. There is no showing, mention, or suggestion of a cylinder, which would attach to the abutment. Abutment 42 is shown with threading 84, for possible screwing a cylinder thereon. It is unclear what the Examiner is basing the rejection on since there is no mention of cylinder in the Klardie '918 reference.

In summary, none of the cited references teach a cylinder for an implant system wherein the cylinder is designed to retain a structural framework material, composite material, or ceramic material, wherein the cylinder has a substantially cylindrical body and includes one or more shelves disposed on a surface of the substantially cylindrical body, wherein the shelves comprise one or more grooves having at least two sides. The cited references do not show or suggest applicants' claimed invention and notice to this effect is respectfully requested.

Accordingly, it is believed that claims 1 – 32 and 43 – 48 specify patentable subject matter and are now in condition for allowance. Applicants therefore respectfully request favorable reconsideration and allowance of this application. The Examiner is requested to telephone applicants' attorney at the number listed below if it will advance the prosecution of this case. If necessary, the Examiner is authorized to charge further fees necessary to advance the prosecution in this case from Deposit Account No. 500718.

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Respectfully submitted,



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